IEEE: Machine learning

- Week 1:
  - Part 1: **What is Machine learning ?!!** 

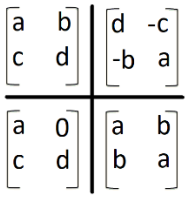
    - We give motivation about ML and it's apps.
  - Part 2: **Comfort with Python ??!!** 

    - Python Syntex and data types.
    - Conditions and loops.
    - Common abstract data types.
    - Assignment guidance.
- Week 2:
  - Part 1: **We have more python!!!**
    - Intro to OOP
    - Intro to Numpy 

  - Part 2 : **Some math in Way**
    - Statistics revision 

      - *Visualizing Data*
      - *Measures of Variance*
    - Probability revision
      - Counting and probability Basics. 

- Week 3:
  - Part 1: **Some Math but with python.**
    - Common Distributions(sampling and binomial).
    - Linear algebra
      - Review on Vectors.
      - Vector Operations.
    - Pandas library
  - Part 2: **Linear algebra with python**
    - Matrices Operations
    - Identity matrices
    - Scikit learn library
    - Write that with python your self.



- Week 4:
  - Part 1 : **Intro to supervised ML**
    - Pre-processing data
    - Linear regression (simple)
  - Part 2: **Continue**
    - SVM & polynomial
    - Discuss the assignment

- Week 5:
  - Part 1 : **Classification**
    - naive algorithm
    - KNN
  - Part 2: **Continue**
    - logistic regression
    - decision tree

- Week 6:
  - Part 1 & 2: **Clustering**
    - K-means
    - The project guide

- Week 7:
  - Neural network
  - The 2nd project guide

Note: this plan may change to be suitable to Average work shop Participants knowledge especially in Math parts.